

PART I

BECOMING A MAC SETUP PRO

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CHAPTER 1

Buying a Mac

IN THIS CHAPTER

- ▶ **Choosing one of the many Mac models to buy**
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Congratulations, you are—or are about to be—the proud owner of an Apple Macintosh computer, or Mac. Even if you’re a seasoned “Machead,” this chapter will give you advice for picking up your next model. This chapter covers what you need to know about getting a Mac: everything from choosing which model to buy, to deciding where to buy a Mac, to getting a good deal on older, secondhand, or refurbished models. This chapter also describes the optional extras Apple offers with its new Macs, plus accessories you should consider for a Mac. But first you must choose which Mac is right for you.

CHOOSING WHICH MAC TO BUY

► That's not to say there haven't ever been any bad Macs. The G4 Cube and Twentieth Anniversary Macs were generally considered flops. But Apple has had far more hits than misses.

If you don't have a Mac already, which one should you get? That's a conundrum that only you can answer. The good news, however, is that **there are no bad Mac computers**. Unlike the free-for-all bazaar that makes up the rest of the PC market, Apple makes just a few models, and it makes sure all of them arrive at your desk in peak condition. Each model is markedly different from the others, but the differences are based on your needs, not quality.

Every new model is typically ahead of the technology curve, is well designed, and has the kind of build quality you'd expect from a premium manufacturer such as BMW or Mercedes. This quality comes with a premium price tag, but with a bit of savvy shopping, you may be able to get a better deal than you originally thought.

FOUR MYTHS ABOUT MACS

When you're in the process of buying a Mac, especially if you're moving from a PC to a Mac, you may have some misconceptions. Although Macs have become much more popular recently, a lot of people who've never started up a Mac have plenty to say about them as computers, usually based on nonsense they've heard from other non-Mac users.

Here are four of the biggest myths about using Macs:

- **Macs aren't compatible with Windows PC:** Almost every type of file that you can open on a PC (Microsoft Office documents, movies, and so on) can be opened on a Mac. You can make changes to these files on a Mac and share them with Windows users. You can even run Windows inside Mac OS X.
- **Macs can't run Microsoft Office:** Wrong! Macs have been able to run Microsoft Office since 1989, and Microsoft Word first appeared on the Mac way back in 1984.
- **Macs can't reuse PC peripherals:** Macs use the same connections that most PC peripherals use (most notably USB), and they are largely made using the same type of physical internal components (hard drives, RAM, and so on). Digital cameras, camcorders, printers, and other devices work as well on a Mac as they do on a PC.

- **Macs don't have any software:** More than 12,000 applications are available for Macs, covering about every kind of computing task you can imagine. Just about every major program (Microsoft Office, Adobe Creative Suite, FileMaker, and so on) is available for Mac.

If you hear any negative talk along these lines, you can be sure that it's a complete myth.

When choosing a Mac, the model you pick largely depends on the features you require. Macs are available in six different models, and each one is aimed at a particular kind of user.

Mac Pro

The Mac Pro, as shown in Figure 1-1, is the most powerful Mac on the market. (Often it's the most powerful home computer on the market.) It's also the most upgradable Mac, offering a level of internal access denied on models such as the iMac.

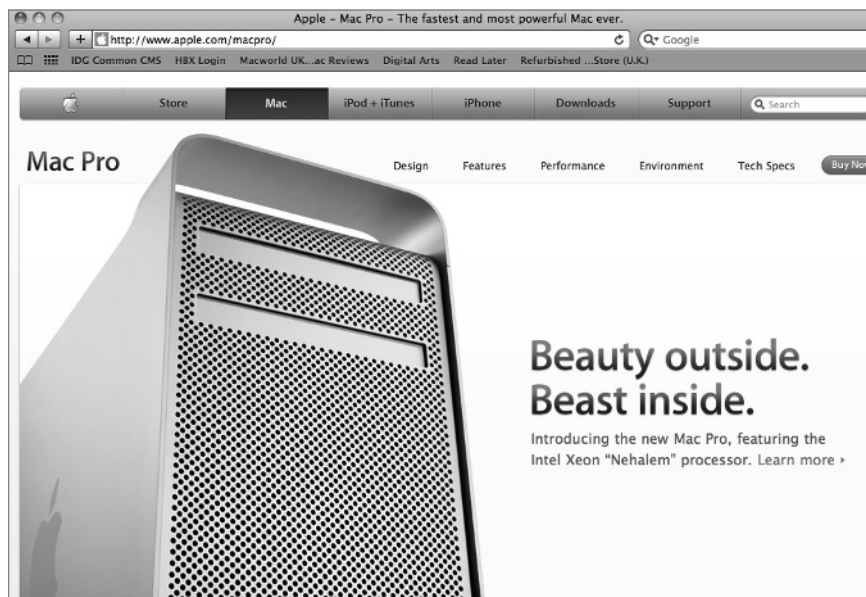


FIGURE 1-1: The Mac Pro model is the most upgradable Mac, with an internal structure that makes adding and replacing components easy.

CROSSREF Chapter 10 has more information on upgrading options for Macs.

Most home users find the Mac Pro overkill. Unless you have a specific requirement for a Mac Pro feature, such as RAID to perform Mac OS X Server functions, or if you require high-end computing function (video editors, scientists, and 3-D graphic designers typically fall into this category), you should consider Apple's consumer model, the iMac, instead.

iMac

The iMac is perhaps the computer for which Apple is most famous. The iMac started out as a classic colorful unit that Apple used to re-launch itself into the computing market. It has since evolved into a svelte aluminum widescreen unit, as shown in Figure 1-2.



FIGURE 1-2: The iMac is Apple's all-in-one desktop computer, aimed at home users.

One of the biggest advantages of purchasing an iMac over other Mac models is the large high-quality widescreen display that makes up the bulk of the computer, including the hard drive. The minimalist design of the iMac also makes it a superb space-saving option.

When you purchase a new iMac, you get an Apple Wireless Keyboard and Magic Mouse by default. However, you can opt for a wired Apple Keyboard and/or a wired

Apple Mouse. New Mac Pro computers come with the older wired mouse and keyboard, but you can pay extra to upgrade to the newer Magic Mouse and wireless keyboard.

CHOOSING A BIGGER DISPLAY

Designers and video editors aren't the only ones who benefit from a large display. In 2005, Pfeiffer Consulting tested the Apple 30-inch Cinema HD display against a 17-inch display in a number of tasks. The report found that working on a 30-inch display doubled productivity when using applications such as word processing or spreadsheet editing; it tripled productivity when using design programs such as Adobe Photoshop. If you consider how much you're paid per hour, spending the extra money on a large display can pay for itself. To read the report, see http://images.apple.com/pro/pdf/Cin_Disp30_report.pdf.

Mac mini

The Mac mini is Apple's lowest-cost model. It was originally targeted specifically at Windows switchers (people who used Windows PCs but wanted to move to Mac). As its name suggests, the Mac mini is an exceptionally small unit, as shown in Figure 1-3. What the Mac mini lacks in stature, it certainly doesn't lack in performance, offering much the same specification as the MacBook.

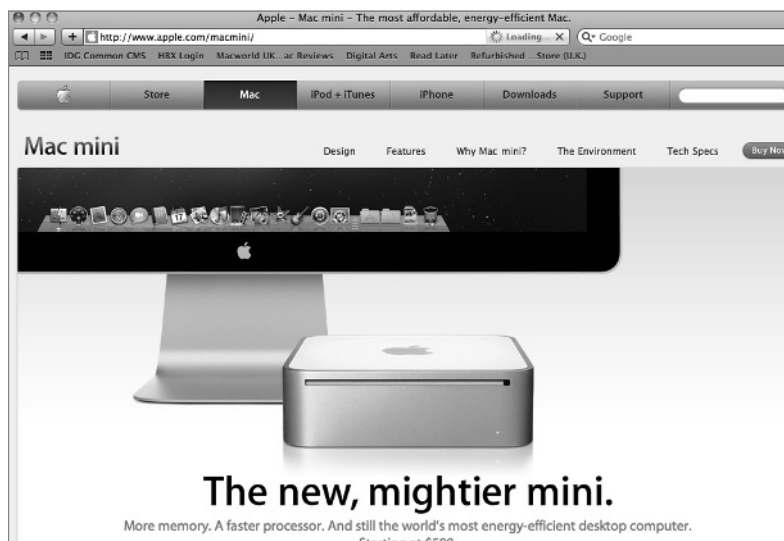


FIGURE 1-3: The Mac mini is Apple's best-value machine, and its small stature makes it a great choice for PC owners looking to put a Mac on their desk.

Its small size and low power consumption have endeared the Mac mini to Apple enthusiasts who've found a range of uses for the device beyond that originally envisioned by Apple. For example, it's possible to attach a Mac mini to a television set to create a great media center. Many people also use the Mac mini as a server for a home office or other small office, and Apple recently created a special edition called the Mac mini Server that comes with two internal hard drives (but no optical drive) and is packaged with Apple's Mac OS X Server software.

MacBook

The MacBook is one of the most popular computers Apple has ever produced. First introduced in 2006, the MacBook is Apple's entry-level **notebook**.

The MacBook sports a 13-inch display, and the keyboard is made from square plastic keys (often referred to as the "chiclet" design because the keys resemble pieces of Chiclets chewing gum), as shown in Figure 1-4. It also houses Apple's large glass multi-touch trackpad to control the on-screen mouse and perform gestures.

► Apple always refers to its laptops as notebooks. It's just Apple's term for the same thing though.

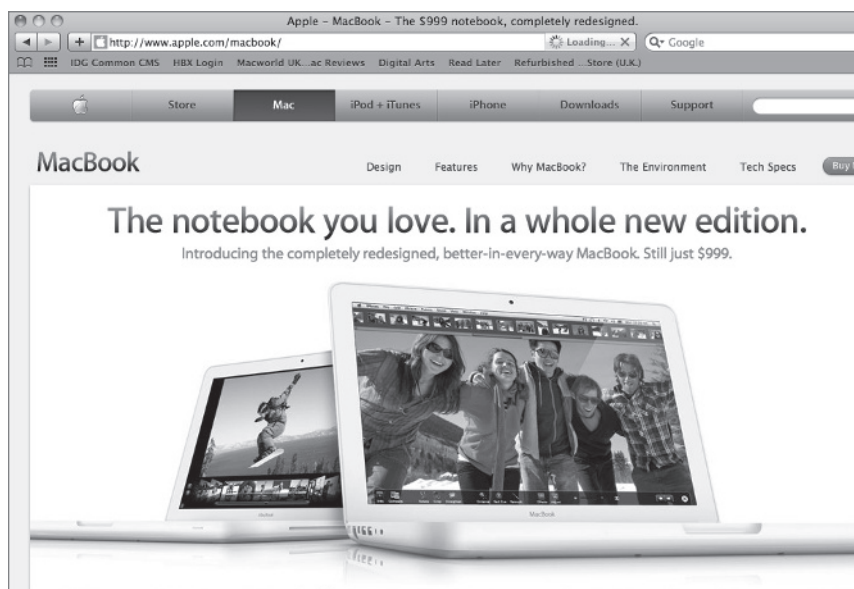


FIGURE 1-4: The MacBook, the most popular computer Apple has ever made, is Apple's entry-level notebook and offers a lot of power for a reasonable price.

~~CROSSREF~~ Chapter 14 has more information on multi-touch trackpad gestures.

The white MacBook is the only model not to feature a backlit keyboard that lights up automatically when the ambient lighting fades. With the exception of the Mac mini, the MacBook is the highest-value-for-the-money Mac. It's no surprise that the MacBook is Apple's best-selling Mac of all time.

WHAT'S A UNIBODY?

All of Apple's notebook models feature a unibody casing. In a unibody casing, the external frame of the case houses the internal components. Although this may sound commonplace, it's actually quite rare. Most devices are created using an internal frame, with external parts attached to it. The unibody design enables Apple notebooks to be lighter and stronger than rival models.

MacBook Pro

Like the MacBook, the MacBook Pro is a portable notebook. As the "Pro" moniker suggests, the MacBook Pro has higher specifications and a wider range of features.

The two most instantly noticeable differences between the MacBook and the MacBook Pro are the silver aluminum casing and the larger display, as shown in Figure 1-5. As well as the 13-inch screen on the MacBook, the MacBook Pro has 15- and 17-inch display options. These larger screen options also have more powerful innards, most noticeably the presence of a **discrete graphics card**. A discrete graphics card has its own memory, unlike the integrated graphics option used on the MacBook, which shares its memory with the main system. This ensures that the MacBook Pro is a much more powerful unit, especially for graphics-intensive tasks such as digital image and video editing, or for running games or programs that use 3-D graphics.

The MacBook Pro also features a backlit keyboard. When the light in your environment fades, the keys light up, enabling you to easily continue typing.

► The current MacBook Pro switches seamlessly between an energy-efficient graphics card and a powerful discrete graphics card for 3-D performance.



FIGURE 1-5: A range of MacBook Pro notebook models offer advanced components and larger display options than the MacBook.

MacBook Air

First introduced in 2007, the MacBook Air is a unique model that some Mac users consider a slightly odd purchase. The MacBook Air is similar to the 13-inch MacBook Pro, except it is shrunk down to an ultrathin case that measures just 0.76 inches thick, as shown in Figure 1-6. As the name suggests, the MacBook Air is all about being lightweight. It weighs in at just 3 pounds, almost 2 pounds less than the MacBook.

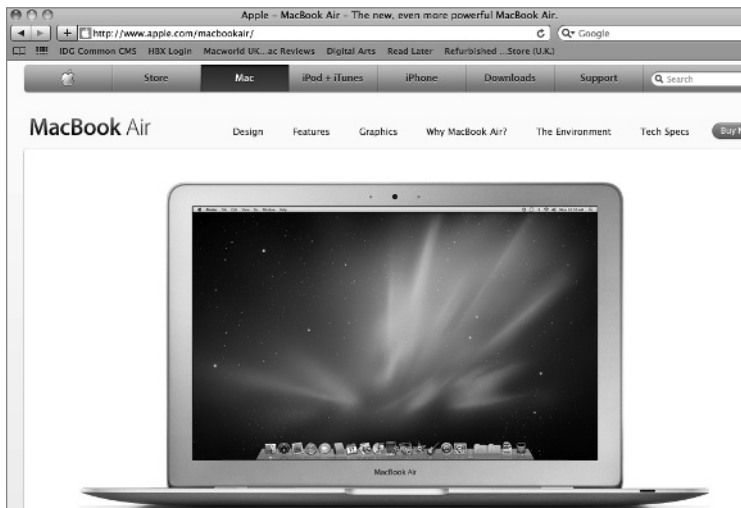


FIGURE 1-6: The MacBook Air's lightweight structure makes it a popular choice for users who spend a lot of time carrying around a notebook.

The screen remains the full 13-inch size, and it has the same full-sized backlit keyboard as the MacBook Pro. Although it lacks the glass trackpad from the MacBook and MacBook Pro, it does have multi-touch capability. Another omission is the optical drive, which you can purchase separately and attach via USB. Apple has a feature called Disc Sharing that enables a MacBook Air to “borrow” the optical drive from another Mac or PC computer.

The reason the MacBook Air is considered **an odd purchase** is because, on paper, the specs don’t add up. Despite costing considerably more than other MacBooks, the MacBook Air has much lower specifications. However, by shaving two pounds off the weight of a MacBook, without compromising on the screen or keyboard, Apple has made a notebook that’s incredibly popular among users who carry around a notebook all day long.

► I own a MacBook Air and swear by it. When walking around all day with a notebook, the extremely low weight is worth every penny.

FOUR REASONS PEOPLE BUY MACS

I asked the Apple experts why people buy Macs over PCs, and they gave me four main reasons:

- **Security:** Macs are more resistant to viruses, malware, and hacking than Windows-based computers. Although several thoughts exist about why this is true, the fact remains that you are less likely to suffer certain Internet-based problems when running a Mac.
- **Reliability:** Macs are, by and large, more reliable than Windows computers. This is partly because the Mac OS X software is better coded and works with a more limited set of hardware. Also, Apple creates both the software and the hardware, so the two are designed to work together without trouble.
- **Ease of use:** Apple is obsessed with making computers and software easy to use. Nobody in the world designs a software interface as well as Apple.
- **Style:** Sometimes it just matters.

So there are four reasons so many people buy Macs. They’re secure, reliable, easy to use, and amazing looking. Why on Earth would anybody want to use anything else?

DECIDING WHERE TO GET YOUR MAC

Once you've decided which Mac to buy, the next obvious task is to get one. Because Apple tightly controls distribution, you are less likely to get a better deal by shopping around for a Mac than you are when buying a PC. Having said that, there are deals out there, and there are reasons for buying a Mac from a store other than Apple. But let's start with going straight to the horse's mouth.

Buying a Mac Directly from Apple

Apple makes computers and sells them directly to its customers. Typically, you can purchase a Mac from Apple in one of two ways:

- ▶ **Apple Online Store:** Apple offers a comprehensive online store at www.apple.com/store. You can also select a range of configuration options and customize your selection to a granular level, as shown in Figure 1-7.
- ▶ **Apple Retail Store:** Apple has a network of 300 worldwide stores. Apple stores operate in most major cities in the United States and Europe, as well as in Japan; Apple even has a store in China. You can find a complete list of Apple Retail Stores at www.apple.com/retail/storelist. The key advantage to visiting a physical store is that all Macs are on display, enabling you to get hands-on experience before deciding on a purchase. Apple also has a range of specialists on hand in each Apple Retail Store to answer your questions.

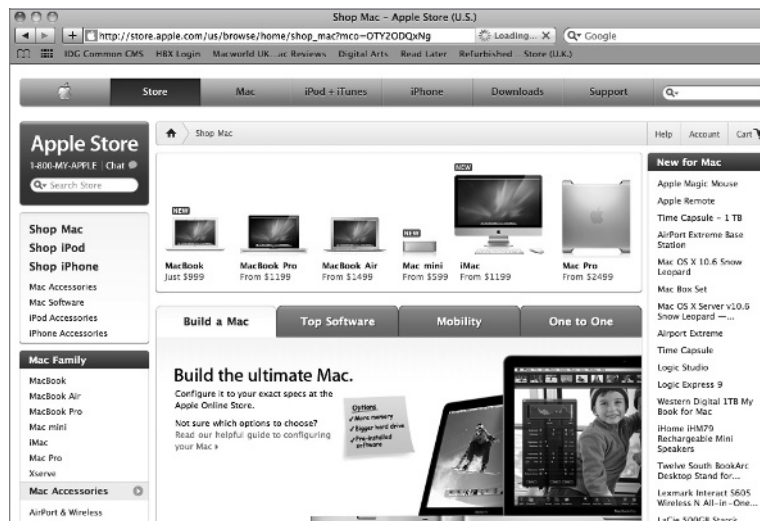


FIGURE 1-7: Apple's online store is an increasingly popular way to customize a Mac and have it delivered directly to your door.

Buying a Mac from an Apple Reseller

As well as buying a Mac directly from Apple, you can also purchase one from an Apple Authorized Reseller. These resellers are stores (both online and physical) that specialize in selling Macs and have passed stringent quality control from Apple, in offering both knowledgeable service and **after-sales support**.

Although fierce price-cutting isn't as predominant within the Mac retail community as it is in PC stores, Apple Resellers do sometimes run special offers, such as free hardware or software with new Mac purchases. You can find an Apple Reseller near you online at www.apple.com/buy/locator.

Apple also has Online Authorized Resellers that sell Macs online. These websites are worth checking out before making a purchase, just in case you can find a better deal than you can get from Apple. Apple has a list of Authorized Online Resellers operating in the United States online at <http://solutionprofessionals.apple.com/catalog>.

One high-profile exception is eBay. The sellers on eBay are unlikely to be Apple Authorized and, you may want to be careful about purchasing a Mac on eBay. Having said that, Apple warranties are valid with Apple regardless of where you purchased your Mac, and Apple uses an online system to track products via serial numbers and authorize products for repair.

► Resellers sometimes offer longer warranties, in a bid to lure customers away from official Apple Stores.

CROSSREF Chapter 21 has more information on troubleshooting a Mac.

GETTING A BETTER DEAL ON A MAC

One of the most common—and, to be fair, in some cases justified—reasons against purchasing a Mac over a PC is cost: Apple makes premium computers and charges a premium cost.

At this writing, the lowest-priced Apple notebook—the MacBook—is priced at \$999; Dell offers a superficially similar laptop for \$550. Upon closer inspection, the Dell computer offers a far lower spec, and I would argue a lower build quality than the MacBook.

I won't get too far into a Mac-versus-Windows PC debate. However, you should be aware of several good arguments for paying the premium Apple charges: superior build quality, integrated hardware and OS, more security against malware and virus

► When you compare the costs of Apple computers to those of PCs with similar specifications, the price is in the same ballpark. It's just that all Apple computers are high spec.

threats, industry standard software such as Final Cut Pro that is unavailable on a PC, and superior home software such as iPhoto and GarageBand that is Mac-only. None of these arguments, however, means much if your budget simply won't stretch.

So what can you do if you really want to own a Mac but simply can't stretch to the amount that Apple charges? Fear not. There are some secret tricks that can get you a great Mac on a budget.

GETTING A COLLEGE DISCOUNT

Apple has a discount scheme for college students. The good news is that to qualify, you can also be a college or K-12 teacher, administrator, staff member, or board member at any level in an educational establishment. Go to www.apple.com/education for more information about getting up to 10 percent off the price of a new Mac. You can also get up to 10 percent off the price of a new Mac by joining the Apple Developer Connection (<http://developer.apple.com>). For an annual membership fee, the Developer Connection gives developers access to the latest software development tools. A student with an active membership in the Apple Developer Connection can use both discounts simultaneously.

Buying an Older Model

As mentioned earlier in this chapter, one of the joys of buying a brand-new Mac is that typically Apple sources high-spec components that are designed to outperform other computers on the market. Apple is often the first to market with new computer processors, and Macs are typically stuffed to the brim with the fastest components.

This high-end performance is great news for new owners, who can be sure their Mac has a healthy life span. (The typical Mac lasts up to five years before technology demands require an upgrade.) But it's even better news for bargain hunters because it means that even last year's Mac is technically better than most of this year's Windows-based PC models. Get an older-model Mac, and you'll get a healthy discount on a great computer.

Because Apple is so secretive regarding new launches, the Apple Resellers may have plenty of old models in stock when a new model is launched. You can shave one-third of the price off a Mac by buying a previous-generation model.

► To get an older model with a healthy life span, stick with Intel Macs (avoid models with old G5 processors) and choose a machine from the last two years.

TIP Make sure to buy a machine powerful enough to handle your tasks. Two websites are useful if you're buying an older model: Low End Mac has a complete list of all profiles from older Macs (www.lowendmac.com/profiles.htm). Also useful is Macworld's Speedmark testing (www.macworld.com/info/speedmark). Macworld's reviews contain comprehensive Speedmark testing for all current and older models.

Buying a Secondhand Mac

Another great way to pick up a Mac for less money is to get a secondhand model, as shown in Figure 1-8. Apple has a lot of power users and aficionados who are always after the latest models and are more than happy to sell you an old one. As with buying an older model, picking up a secondhand model doesn't necessarily mean that you are buying an obsolete Mac. Macs have a healthy life span, and even a model from a couple years ago will still function admirably.

▶ Apple also sells secondhand refurbished models. There's more on this later in the chapter.

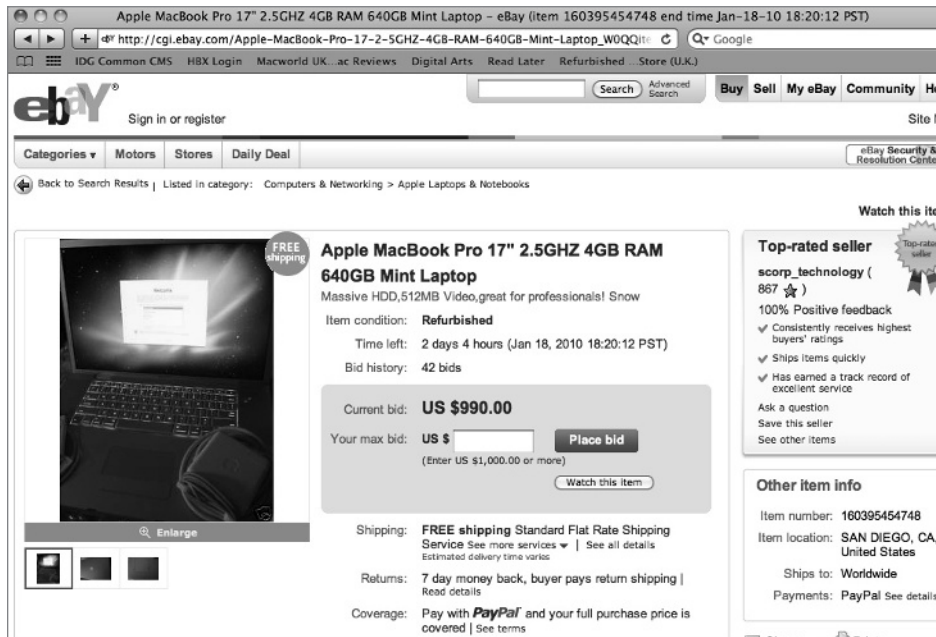


FIGURE 1-8: Buying a secondhand Mac or an older model is a great way to pay less than the premium that Apple charges on brand-new computers.

You need to check that the machine you are picking up is powerful enough to meet your needs. Aside from this, the main considerations with picking up a secondhand model are ensuring that the device is in good working order, determining whether it has warranty still available, and making sure you pay a reasonable price.

GETTING INFORMATION ABOUT A SECONDHAND MAC

Because you are unlikely to buy a secondhand Mac from a store, you may want to check that the advertised Mac matches the description. You might also be able to get a lot of information about the Mac that even the seller might not be aware of.

You can get information about a Mac via a Mac OS X application called System Profiler, as shown in Figure 1-9. If you are inspecting a Mac in person, you can use System Profiler to check the Mac. To access System Profiler choose Apple → About This Mac from the menu bar and click More Info.

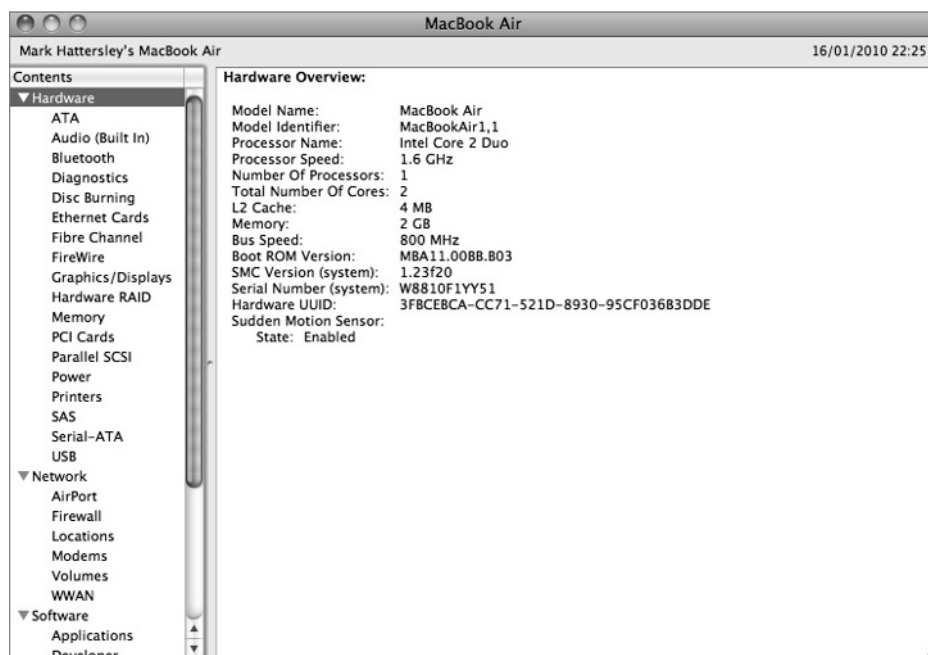


FIGURE 1-9: The System Profiler utility displays a wide range of information about a Mac, from the type of hardware it contains to the installed software.

TIP When buying a secondhand Mac, make sure to get the installation discs for any software included in the sale. If you don't possess the physical discs, you may have legal problems regarding the license, and you may find it difficult to obtain updates. Also, if you don't have the installation discs, you won't be able to re-install the software if there are any problems.

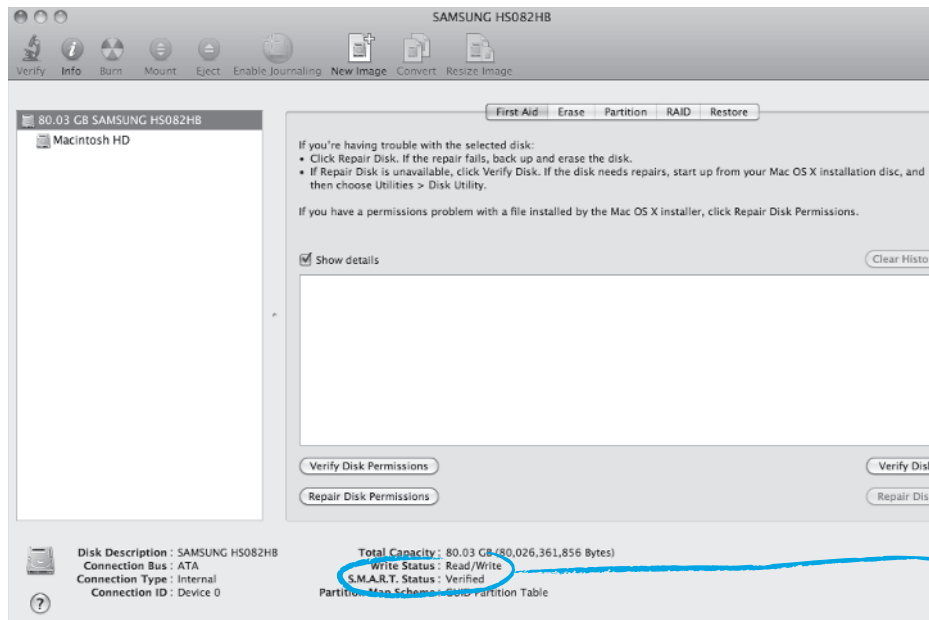
CHECKING FOR HARDWARE ERRORS

One of the key concerns most people have when buying a secondhand Mac is whether it has an unknown fault with the hardware. Problems with the software can usually be rectified. Here is a list of items to check prior to handing over your money.

CHECKING THE HARD DRIVE

Open the Disk Utility application by choosing Go → Utilities from the Finder menu (or pressing SHIFT+⌘+U) and double-clicking Disk Utility.

The first thing to check is the S.M.A.R.T (Self-Monitoring, Analysis, and Reporting Technology) status of the hard drive. You can check this at the bottom of the Disk Utility window, which should say “Verified,” as shown in Figure 1-10.



S.M.A.R.T.
status verified

FIGURE 1-10: Disk Utility enables you to check the S.M.A.R.T status of the hard drive.

► In addition to being annoying, this noise often occurs shortly before a hard drive goes kaput.

One final method of checking for a problem is to physically listen to the noises the hard drive makes when idle and during use. A good way to listen to the hard drive in action is to copy a large file from one area to another—or highlight a large file, such as a movie clip, and select File → Duplicate from the menu bar (or press ⌘+D). Normally the hard drive should remain relatively silent when not copying a file, and you may hear a faint clicking noise during copying. If the hard drive makes a scraping or whining noise, something may be amiss. A persistent audible **high-pitched whine** should be of particular concern.

TIP If you have never owned a Mac prior to buying one secondhand, try to get some time with one—either in a store or with a friend—prior to making a purchase. Familiarize yourself with the sounds that the device makes. Quite often, a computer component makes an odd noise before it fails.

CHECKING THE OPTICAL DRIVE

► Hard drives and optical drives both have moving parts, which makes them more error-prone.

The optical drive is another area you should check prior to purchasing a secondhand Mac. Unlike with the hard drive, Disk Utility can't check the physical status of an optical drive (because the disks are, by nature, replicable). However, **like the hard drive, an optical drive unit is prone to error** and should be tested before use.

The best way to do this is to insist on observing a Mac's optical drive in action. At the very least, you should ensure that the drive accepts and ejects CDs without problem. That is, the machine should eject a disc smoothly, with an electric whir. You should also ensure that you can copy files from the optical disc to the hard drive without error. As with hard drive, you should listen for any unusual noises. A slight whirring is normal, as the optical disc spins up prior to the data being read. However, be wary of any scuffing noises that suggest the disc isn't spinning cleanly in the drive. And as with hard drives, any high-pitched whines are not normal.

► You can't use mini-CDs in slot loading drives.

Most Macs (apart from the Mac Pro and MacBook Air) come with **slot-loading optical drives**. Replacing these is both expensive and difficult so make sure to test the optical drive thoroughly.

CHECKING THE KEYBOARD, TRACKPAD, AND MOUSE

Be sure to give the keyboard, trackpad, and mouse a thorough test prior to purchasing a secondhand Mac. Although these components are well built and sturdier than most, they are also the parts that receive the most physical use. To test the keyboard, open the TextEdit application by choosing Go → Applications (or pressing ⌘+A) and double-clicking TextEdit. Type out some sample text.

CHECKING A MAC NOTEBOOK

When purchasing a Mac notebook secondhand, there are a few things you should check in addition to what you check when considering a desktop model:

- ▶ **Check for dents:** Aluminum MacBooks are sturdy creatures, but one sign of mistreatment (specifically that the device has been dropped) is to check for dents in the case.
- ▶ **Look for signs of scruffiness:** The white MacBook models are prone to collecting dirt. Although this isn't necessarily a problem, it may be a sign that the owner has taken less care of your new pride and joy than you will.
- ▶ **Check the lid:** Make sure the lid opens and closes smoothly, without difficulty. The modern MacBook range has a magnetic clasp that connects the lid to the base. Older MacBook Pro models have a silver tab on the front of the MacBook that you push in to release the lid. These tabs are particularly error-prone, so make sure the lid opens and closes smoothly.
- ▶ **Make sure the backlit keyboard works:** If the unit has a backlit keyboard, look at whether it works correctly. The only real way to test it is to darken the room.
- ▶ **Make sure the device sleeps:** When you close the lid, the notebook should go to sleep. The best way to test this is to look at the white Apple logo on the reverse of the display. This logo should light up when the notebook is in use and should quickly turn off when the lid is closed.
- ▶ **Ensure that the battery charges:** Make sure the device is plugged in during testing and that the battery charges correctly. The chargers on recent Apple notebooks should connect and be held in place magnetically (a system called *MagSafe*). A light on the side of the connection keeps you informed of charging status; orange signifies charging, and green indicates fully charged.
- ▶ **Ensure that the battery holds charge:** One thing you need to be careful of when buying a secondhand machine is the amount of charge the battery still holds. A MacBook battery, when new, provides between 5 and 8 hours of use (depending on the size and type of battery), but this capacity can drop over use. A full charge on an old battery lasting 30 minutes isn't unheard of, and eventually the battery will fail to hold any charge at all. You should check the battery life indicator in the menu bar and make sure it displays the time instead of the percentage by \mathbb{A} +clicking on the battery icon and choosing Show → Time from the drop-down menu. Then you need to wait a few minutes for the notebook to operate without a charge and see how much remaining time is displayed.

Apple builds high quality machines, but Macs (like all computers) are complicated pieces of machinery, and there are lots of things that can go wrong.

GETTING A GUARANTEE

It may sound obvious, but the best thing you can do prior to buying a secondhand Mac is to ask the person selling it if he or she knows of any problems whatsoever. Of course, there's no guarantee of the person's honesty, but getting a guarantee prior to purchase in case you discover any errors is a good way to go about any sale. One advantage to purchasing via an auction site such as eBay (www.ebay.com) is that you can check whether the seller offers a guarantee and uses the PayPal Buyer Protection program and eBay Resolution Center (<http://resolutioncenter.ebay.com>) if there are any problems.

CHECKING THE APPLE WARRANTY AND APPLECARE

Apple offers 12 months of support and care with all new Macs. You can also purchase a longer support package called AppleCare that offers 3 years of coverage from the original date of purchase. AppleCare provides telephone support plus global repair of both hardware and software.

HOW MUCH IS THAT MAC WORTH?

There are two good ways to measure the worth of a Mac. The first is to head to a website called Mac2sell (www.mac2sell.com), to get an accurate valuation. Another way to determine the value of a secondhand Mac is to check a popular auction site, such as eBay (www.ebay.com), for auctions of the type of Mac you want that are just closing or have already completed.

Getting a Refurbished Mac

In addition to buying a new Mac or a secondhand model, you have a third option: You can buy a Mac from the refurbished section of the Apple Store (<http://store.apple.com/us/browse/home/specialdeals>). "Wait," you say. "Isn't *refurb* just another term for *secondhand* or, even worse, a term that means *previously broken*?"

Not only do you get the full 12-month warranty that comes with a new Mac, you also get the option to purchase an additional AppleCare plan to extend the period of service and repair to 3 years. That should be enough to calm your nerves about the quality of the product.

Typically you will save at least 10 percent on a machine, and this amount rises to around one-third off the retail price. So where do the refurbished products in the Apple Store come from? Some of them are Macs that were returned as faulty and have been repaired. But others may have been returned for other reasons, such as non-payment on a credit plan. Apple also loans equipment to media sources to test out, and for events and trade shows such as Macworld Expo. When the equipment has been used to show off Apple products, it is placed into the refurbishment scheme.

You shouldn't count on a refurbished model not showing any signs of previous use, but if you're happy to have a Mac that may have been used before but has been checked out, works properly, and comes with guarantee, then the refurb section of the Apple Store, as shown in Figure 1-11, is worth checking out.

► You can also get refurbished iPhones, iPods, AirPort Base Stations, and just about every other Mac product on sale.

► The last three Macs I've bought have been from the refurb section of the Apple Store. In each instance, I couldn't tell if they had been used before.

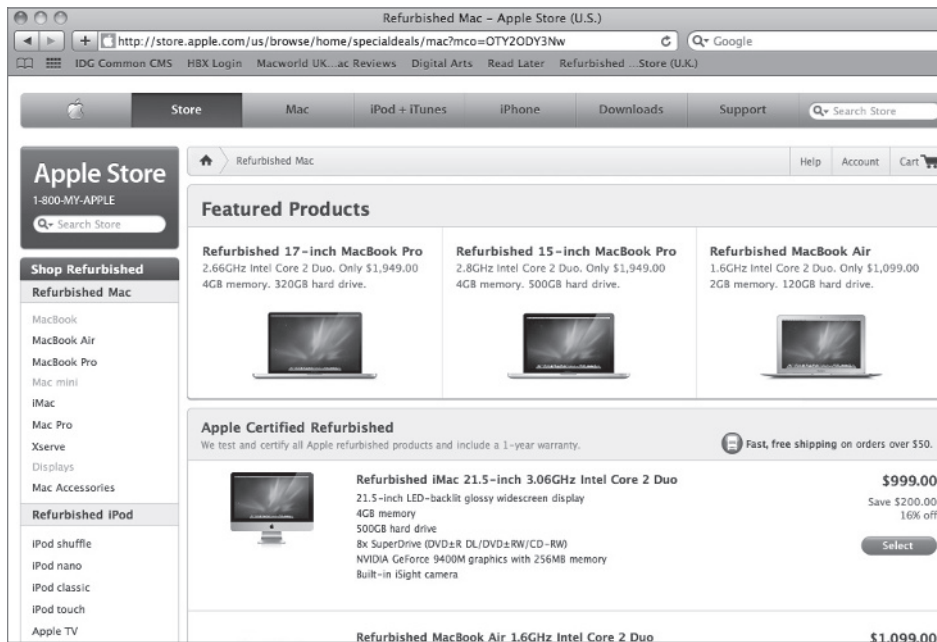


FIGURE 1-11: The refurb section of the Apple Store enables you to pick up a Mac that was returned to Apple and refurbished. Refurbs come with a 12-month warranty.

GETTING OPTIONAL EXTRAS WITH A MAC

When you purchase a Mac from the Apple Online Store, you need to select a number of options before you finalize your purchase. The range of options may seem a little daunting at first, as Figure 1-12 shows, but it's important to choose the right options.

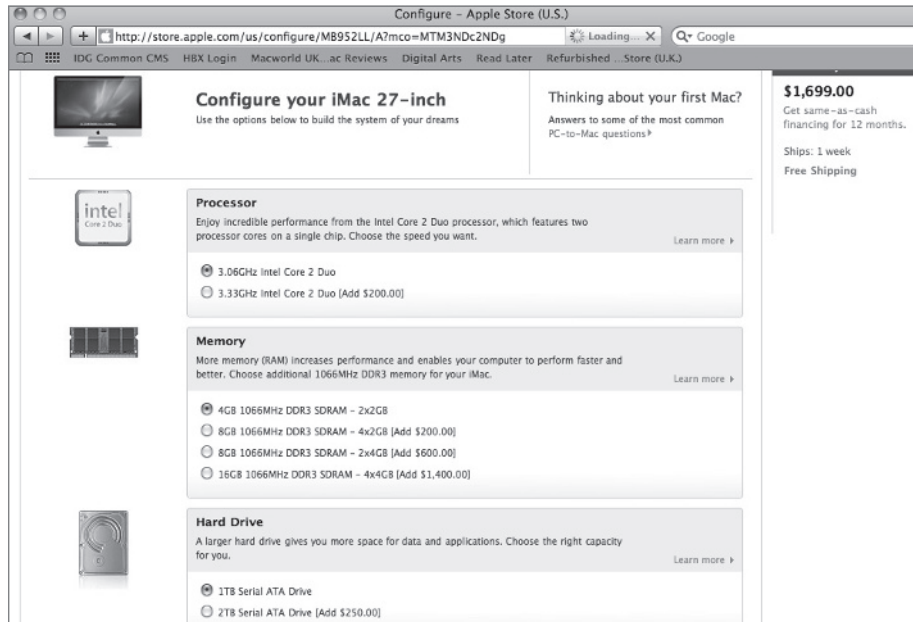


FIGURE 1-12: Apple offers a range of optional extras with a new Mac. Choosing the right options enables you to build the machine that is right for you.

Upgrading Your Processor

► It is sometimes possible to replace and upgrade a processor in a Mac, but it's extremely difficult and invalidates the warranty.

The processor option is normally available only with a brand-new Mac. Not every Mac has an upgrade option, and often the price of upgrading can be high. However, upgrading the processor is an option worth exploring. Processors are hardwired into all Macs, and upgrading a processor after you've purchased a Mac **isn't an option**.

A faster processor enables a Mac to perform complex tasks more quickly. Most Macs come standard with powerful processor units. A faster processor is unlikely to make a huge difference unless you do a lot of high-end work. Picking a base unit with the standard processor will give you many years of performance. Having said that, opting for a faster processor will extend the usable lifetime of your Mac.

Purchasing Extra Memory

Another option to consider when buying a new Mac is whether to purchase extra memory. More memory enables Macs to run programs faster and more efficiently and to run multiple programs at the same time. Prior to Mac OS X Snow Leopard, most applications ran in a 32-bit environment, where the greatest amount of memory available was 4GB. Since the introduction of Mac OS X 10.6 Snow Leopard, a Mac program can use up to **32TB of theoretical memory**.

► Even though Snow Leopard can support 32TB, the most memory a Mac currently supports is 32GB on the 8-Core Mac Pro.

TIP If you want to get a bargain on memory, don't purchase it from Apple at the same time you purchase your Mac. Apple charges a premium for RAM, and you can typically purchase a RAM upgrade for less than the amount Apple charges. You can get RAM from a lot of different companies, such as Kingston (www.kingston.com) and Crucial (www.crucial.com).

Adding a Larger Hard Drive

Your hard drive is the central storage area for your Mac, and it's important to get one that fits your needs. If you're coming from an old computer, you might find the storage space on the latest Macs bountiful. But hard drives fill up quickly when you start installing applications, downloading movies, importing photos, and so on.

Whether you purchase a larger hard drive with your Mac depends largely on what you feel your needs are. Although most Macs come with a reasonably large hard drive (the MacBook Air is a notable exception), it is reasonably easy to upgrade the internal hard drive on most Macs. However, it's generally easier and more practical to add extra storage to a Mac in the form of an external hard drive.

CROSSREF Chapter 6 has information on keeping your hard drive free from clutter, and Chapter 10 has more information on upgrading your hard drive space.

Getting a Display with Your Mac

Most desktop Macs come with a display attached, with the exception of the Mac mini or Mac Pro. So if you're purchasing one of these, unless you already have a display, you need to consider getting one. It is also possible to attach a second display to Mac notebooks and the iMac. Some people find that working with two screens makes life

easier and more efficient. Attaching a larger screen to a Mac notebook (along with a keyboard and mouse) enables you to use it like a desktop computer.

Choosing Apple Keyboard and Mouse Options

If you purchase an iMac or Mac Pro from Apple, your purchase will include a mouse and keyboard by default. You can opt for different wired or wireless mouse options and choose international language keyboards before purchasing.

Adding an Apple Remote

An Apple Remote used to be standard with all Macs, but now it is an optional extra. The Apple Remote enables you to access the Front Row interface on a Mac and play music, watch videos, and display photographs from a distance. It is also used to control an Apple TV.

Getting a Mini DisplayPort Adapter

Apple recently included a new kind of display connection called a Mini DisplayPort. At this writing, the Mini DisplayPort is a relatively rare monitor connection. Apple includes three options to connect MiniDisplay ports to other common monitor connections:

- ▶ Mini DisplayPort to DVI
- ▶ Mini DisplayPort to Dual-Link DVI
- ▶ Mini DisplayPort to VGA

The adapter required depends on the connection used on your monitor. Typically, modern monitors (with the exception of those made by Apple) use DVI, with Dual-Link DVI required for monitors with 30-inch or larger displays. VGA is used on older monitors and is often found on projectors.

Selecting Software with Your Purchase

Apple offers a range of software that you can purchase along with your new Mac. Every new Mac comes with Mac OS X and the iLife suite of applications. Mac OS X has a wide range of programs included, for tasks such as using the Internet, sending e-mail, managing contacts, and other basic functions. It even has a built-in dictionary and text editing programs that function as a good—if somewhat basic—word processor.

Purchasing MobileMe with Your Mac

MobileMe is an online membership service that you pay for annually. MobileMe enables you to use your Mac from another location via the Internet. It includes e-mail, online iCal, and Address Book syncing; syncing of certain Mac OS X items such as preferences and Keychain; online storage; and remote access called Back To My Mac. It syncs information on Mac and Windows systems, so it's a good choice for users of multiple operating systems. Chapter 22 has more information on MobileMe.

▶ You can usually save money by buying a boxed copy of MobileMe from an online retailer such as Amazon.

Selecting One to One Membership

One to One is a scheme Apple offers that enables you to get personal training with a new Mac. Training typically takes place in Apple Retail Stores, in the form of an individual meeting with an Apple Genius. For more information on One to One, see www.apple.com/retail/onetoone.

▶ Apple calls its in-store experts Apple Geniuses.

Getting a Printer to Go with Your Mac

A printer to physically output information to paper used to be considered an essential accessory for any computer. These days, it's considered more of an extra. The type of printer you choose depends on your needs. Typically, people interested in printing graphics go for inkjet printers, and users with business needs go for laser printers or all-in-one units. Be aware that the biggest cost of a printer isn't the unit itself but the cost of replacement ink cartridges; this is especially true with inkjet models.

You may not really need a printer. Mac OS X can turn virtually any document into a PDF (Portable Document Format) file, which you can view on Macs, Windows PCs, and UNIX/Linux computers; e-mail to other people; and display on iPhones or iPods. More and more people are forgoing printers completely and using digital files instead.

▶ To create a PDF file from just about any application, choose File → Print, click on PDF, and choose Save as PDF.

CONSIDERING OTHER ACCESSORIES TO GO WITH YOUR MAC

Although Apple offers a comprehensive set of hardware and software options with a Mac, there are some other common items you might consider purchasing along with your Mac:

- ▶ **Apple Airport Extreme Base Station and Airport Express Base Station:**
These are both extremely good Wi-Fi routers. While they require a modem to

provide an Internet connection, they are both likely to provide much better service than a Wi-Fi router provided by your Internet service provider. The AirPort Express is smaller and designed to be taken on the road; the AirPort Extreme has multiple antennas for faster performance. Chapter 8 has more information on networking.

- ▶ **Time Capsule:** This unique device is similar to the AirPort Extreme Base Station but also includes a hard drive for remote backups. Chapter 7 has more information on backing up your Mac with a Time Capsule.
- ▶ **TV tuner:** The ability to watch and record digital television and radio on a Mac is a great inclusion, and a number of USB devices enable you to record programs.
- ▶ **External hard drive:** Getting an external hard drive is a relatively inexpensive way of increasing the amount of storage available. Also, you can use an external drive to back up a Mac, using Apple's Time Machine software.
- ▶ **Laptop bag:** If you're getting a Mac notebook, you probably want to also pick up a laptop bag to store it and carry it around safely.
- ▶ **Speakers and earphones:** Every Mac (even the Mac mini) has a built-in speaker, but the sound quality is better on some models than on others. If you have a Mac Pro or Mac mini, you might want to consider investing in a pair of external speakers. Alternatively, you can attach a pair of earphones to any Mac to listen to audio.

While there is any number of cool accessories to go with a Mac, you shouldn't feel the need to get carried away. A Mac fresh from the box packs plenty of power, and usually has all you need to get up and running. You can always add on extra features at a later date.

SUMMARY

The first step toward Mac nirvana is getting a machine, and just looking at all of the possibilities can be lots of fun in and of itself. When you purchase a new Mac, a secondhand Mac, or a refurbished Mac, you can be secure in knowing that your new machine will be of the highest quality. Whether you use your new Mac for business or pleasure, it comes equipped with plenty of software to get you up and running, and there is an abundance of additional software and hardware so that you can get your Mac to do whatever you need it to.